USING THE COMPUTER PROGRAM   **CHAPTER 2**

The Municipal Ability to Pay Model ("MUNIPAY") is an interactive computer program that runs on IBM-PC compatible computers in the Windows^{TM} environment. This chapter presents an overview of procedures for using MUNIPAY to evaluate a municipality's ability to afford environmental expenditures. For a detailed guide to constructing and selecting cases and to running demographic and affordability analyses, see Chapters 3 and 4 respectively.

Chapter 2 contains five sections. Section A describes the computer program's structure, and provides an overview of the choices that MUNIPAY presents during program execution. Section B explains the procedures for starting the program on your computer. Section C provides data format requirements and additional helpful hints for entering data. This section also illustrates the error messages the model provides if you fail to enter data properly. Section D explains the procedures for ending the program. Section E gives you an overview of the different options for printing and exporting your results.

A. STRUCTURE OF THE PROGRAM

1. <u>Overview of the Model</u>

As discussed previously, MUNIPAY performs two different analyses: a demographic comparison, and an affordability calculation. The two sets of analyses operate independently of one another, and therefore you can run just one of the analyses if you desire.

The demographic analysis uses U.S. Census data to compare the municipality to state and national norms. The user must enter the data for the municipality; MUNIPAY already contains databases for national norms and all 50 states. The comparison requires no other inputs, and displays its results in a single table. The demographic analysis does not give the user a specific conclusion on the municipality's demographics, but instead provides a better understanding of long-term changes in the community's resource base.

The affordability analysis assesses the amount of currently available funds and then, if necessary, the amount of funds available through financing. The user can accept MUNIPAY's default values for the run parameters, or customize them. The currently available funds calculation looks for any excess monies in the municipality's "General Fund" balance and, if applicable to the case, its "Enterprise Fund" working capital balance. If currently available funds are not sufficient to pay for the environmental expenditures, the affordability analysis then assesses the municipality's current debt burden and its ability to take on additional debt. MUNIPAY displays a summary table for the affordable level of environmental expenditures, plus other tables detailing the municipality's current condition and the projected financial impact from the sought and affordable level of expenditures.

## 2.	Data Requirements

Before you use MUNIPAY, the municipality must complete the appropriate data request form.[1] For the purposes of data entry and analysis, MUNIPAY divides municipalities into three different types, and provides different data request forms corresponding to each type. Chapter 3 provides examples of these forms and an explanation of the different municipality types. Once you have obtained the completed form from the municipality, data entry is relatively quick and easy.[2]

## 3.	Overview of Computer Program

This section describes the program's structure. Chapters 3 and 4 provide a detailed explanation of each individual screen's content.

The model operates in the Windows™ environment.[3] Each screen prompts you for specific information and will not allow you to continue until you respond to the prompts. Within each screen you can enter information in any order you wish, and make necessary edits. Once you complete each screen, click on the "Continue" button at the bottom of the screen to continue with the program. You can leave the program at any point by clicking on the "Exit" button at the bottom of the screen.

Once you access the model, the first screen will prompt you for your name, your EPA Region (which you must select using the scroll bar), and where you would like to store output files. Do not

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[1]	See Appendix C or print the data request form directly from the model by clicking the "Data Form" button at the right of MUNIPAY's main screen.

[2]	If you are uncertain of which data form to provide, an alternative approach is to request that the municipality complete both forms. Also, if the municipality for some reason refuses to provide data, or delays excessively, you might be able to obtain the municipality's financial statements from a commercial provider. (One such provider is available on the internet at http://www.dpcdata.com.)

[3]	If you are not familiar with the Windows™ computing environment, consult a "Microsoft Windows™ User's Guide."

save your output to the same directory that contains the MUNIPAY program files. Instead, designate a separate directory for your output. Exhibit 2-1 provides an example of the user "Fred Red" who has created a subdirectory "MUNIRUNS" within his EPAMODS\MUNIPAY directory. During future model sessions MUNIPAY will display your prior entries as the default. You can simply click on the "Continue" button to accept these entries or use your mouse and keyboard to edit them.

Exhibit 2-1

INTRODUCTORY WELCOME SCREEN
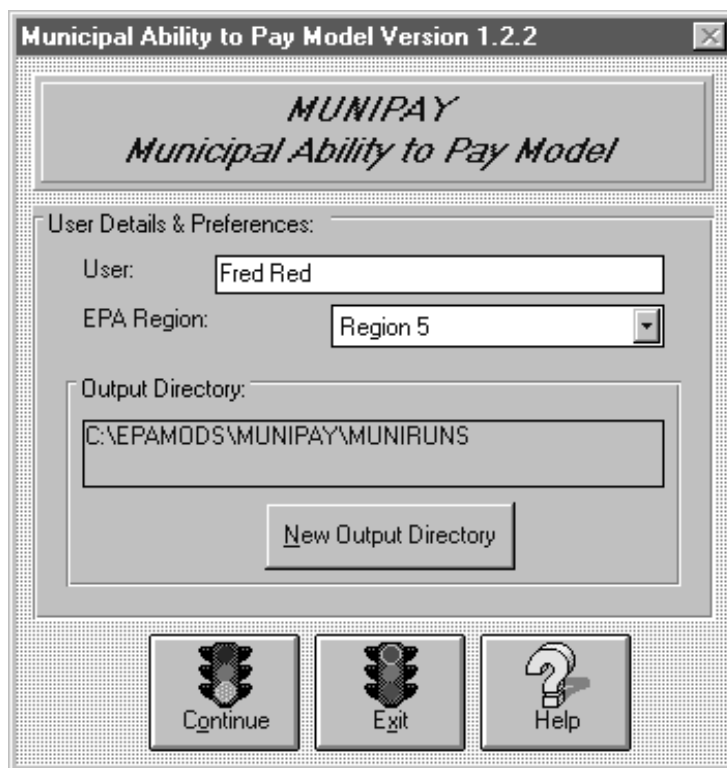
The next screen represents the "main" screen of the model — here you select a case to examine, begin data entry or data editing, and undertake a demographic or affordability analysis. You will return to this screen after you complete a given task, such as data entry or editing.

After you determine whether the case is existing or new, you are ready to enter or edit case information. For a new case, MUNIPAY will prompt you for basic case information: the municipality's name, state, and entity type. From the main screen, you then select the Enter/Edit button for either census or financial data. After completing data entry you can proceed to the right-hand side of the screen for performing analysis runs, selecting either the affordability or demographic analysis options. The affordability analysis requires you to create named runs, which allows you to vary run parameters and save different sets of results. By contrast, the demographic analysis requires no run parameters and is far less complex, therefore offering only the single option of running the analysis.

To access an explanation of the information MUNIPAY requires at any point during your use of the model, simply press F1 or click on the "Help" button, which is available in most of the model's input and output screens. The help screens provide context-sensitive help, including information pertaining both to running the model and understanding and interpreting the model's input and output values.

MUNIPAY displays the results of your demographic and affordability analyses on your computer screen and automatically saves all results for later printing or for further modification. You can print either summary results only, or all of the detailed exhibits. When you are finished, you can choose to run the program again or end the program session. If you run the program again, you can change one or more of the data inputs from your previous run, or create entirely new runs for the same case using different run parameters. You can then recalculate the affordability analysis without having to reenter all of your input values. Chapter 4 describes these procedures in more detail.

B.   GETTING STARTED

MUNIPAY requires a personal computer running the Windows operating system (version 3.1 or higher). In addition, for optimal formatting of various data entry screens, set your display in the control panel to "small fonts" option. ("Small fonts" is the Windows default, so unless your display settings have been altered, your computer should be set appropriately.)

The remainder of this section describes how to access MUNIPAY from EPA's national local area network (LAN) and also how to install and run the model on a stand-alone PC.

1.   National LAN

If this is your first time using MUNIPAY, find out from the LAN administrator in which drive and directory the model resides. Enter Program Manager within Windows™. From the menu bar, click on "File", then "Run."   Then type "*drive*:*directory*\lappinst.exe," where *drive* and *directory* are the drive and directory names the LAN administrator has specified. Click "OK," even if you receive a warning message that you cannot copy the file. The message is merely notifying you that the setup for the model already exists on your version of Windows™.

The Municipal Ability to Pay Setup Screen will appear. In this screen you must specify a separate directory in which to store the program. Enter a name of your choice, either an existing directory, or a directory you want the program to create. Do not, however, enter a root directory (e.g., c:\ or f:\); you must specify a subdirectory. Then click "Continue." The computer will copy the files into your selected directory and issue a completion message. Then click "OK." The icon for the MUNIPAY Model will now appear in Program Manager, indicating successful installation.
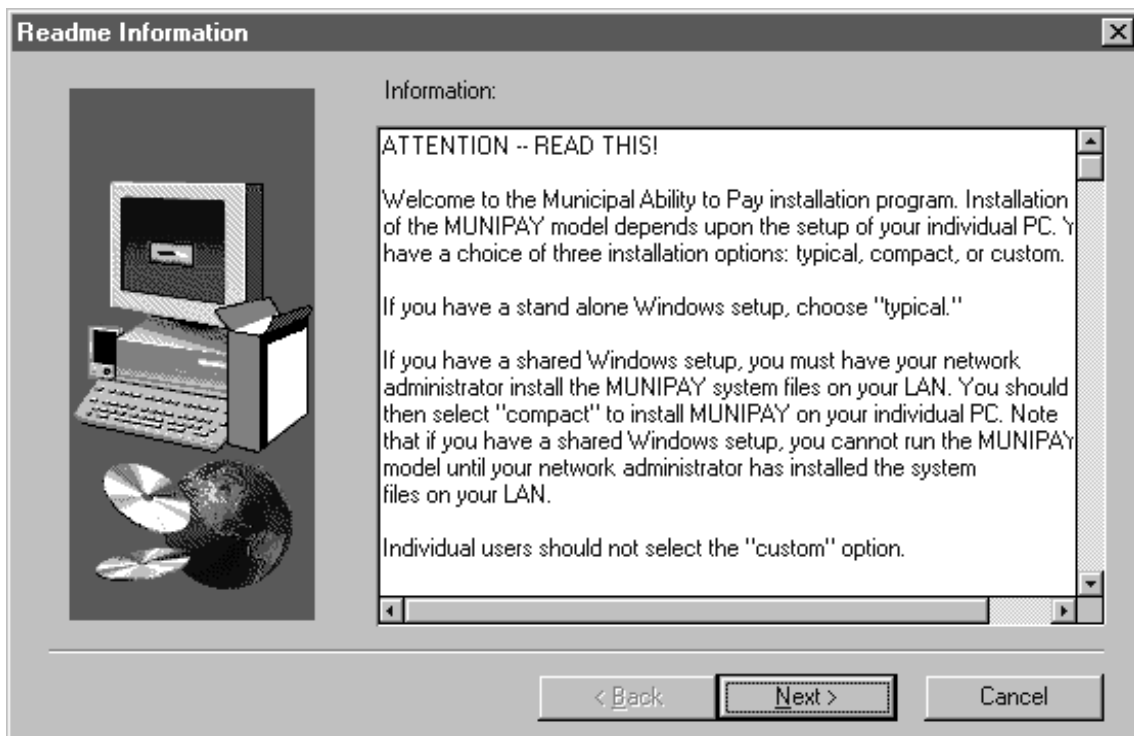
2.   **Stand-Alone PC**

If you have access to the two floppy disks containing the PC version of the MUNIPAY model, you can load the program onto your hard drive. First, insert Disk 1 into a floppy drive (probably drive a:\ or b:\).

- If you are running Windows™ 3.x or Windows™ NT 3.5x, you should then enter the Program Manager. If you have any other applications running within Windows™ (e.g., word processing software, clock, e-mail), close them. Within the Program Manager screen, go up to the Menu bar, click "File," then click "Run." In the command line of the Run dialogue box, enter "a:\setup.exe" (or "b:\setup.exe" if the floppy is in the b:\ drive). Then click "OK." If you receive a warning message that you cannot copy a file because it is in use, simply click "OK." It is merely notifying you that the file the installation system is trying to copy already exists on your computer and is currently open.

- If you are running Windows™ 95 or Windows™ NT 4.0, go to the Tool Bar and click the "Start" button. Choose "Run" from the Start Menu (usually located in the lower left-hand corner of your screen). In the command line of the Run dialogue box, enter "a:\setup.exe" (or "b:\setup.exe" if the floppy is in the b:\ drive). Then click "OK." If you receive a warning message that you cannot copy a file because it is in use, simply click "OK." It is merely notifying you that the file the installation system is trying to copy already exists on your computer and is currently open.

The first MUNIPAY setup screen will appear as shown in Exhibit 2-2. Before beginning you will be asked to read a short explanation about the installation options. PLEASE READ THIS SCREEN BEFORE PROCEEDING WITH INSTALLATION! MUNIPAY requires several different installation options because computer support staff in EPA regions as well as state agencies can choose to setup their LANs in several ways. In most regions, you will have all of your system files located on your own individual PC. If this is the case, you should choose "typical." Alternatively, in other regions, your system files may be located on your regional LAN. In this case, you cannot overwrite the system files during the installation process as required for the MUNIPAY model to load. You should install the "compact" option to your computer and acquire assistance from your computer support staff to install the system files on your LAN. You should contact your computer support staff to determine which Windows setup is used in your region. For more information, please see the instructions illustrated in italics below.

Exhibit 2-2

"MUNIPAY INSTALLATION - FIRST SCREEN"

Installation of the MUNIPAY model depends upon the setup of your individual PC. You will have a choice of three installation options: typical, compact, or custom. No one should ever select "compact." If you have a stand alone Windows setup, choose "typical." If you have a shared Windows setup, you must have your network administrator install the MUNIPAY system files on your LAN. Once you have been notified that the administrator has installed these system files, you should then select "typical" to install MUNIPAY on your individual PC. Note that if you have a shared Windows setup, you cannot run the MUNIPAY model until your network administrator has installed the system files on your LAN. Individual users should not select the "custom" option.

If you do not know the type of Windows setup that is installed on your individual PC, please seek help from your network administrator.

If you are a network administrator, select the "custom" installation option. You will then be given a choice to install program files, system files, or all files. If your network setup is shared, you MUST install the system files to the LAN to enable your users to run MUNIPAY. Verify the file dates and versions against the list provided in the Administrators' Instructions and notify users that they may proceed with the installation. You may also choose to install the program files on the LAN to allow for easier distribution of the model. If you install the program files to the LAN, please make sure that your users have full access to the directory in which MUNIPAY is stored.

If you have any questions about the installation of the MUNIPAY model, please call EPA's Economic Support Helpline at (888) ECONSPT.

After you finish reading the installation instructions, please press "Next." The second setup screen will appear as shown in Exhibit 2-3. You will also be asked to designate a directory in which to store the model. The default directory is "c:\MUNIPAY" (assuming that your local hard drive is c:\). If you wish to save the model to a different directory, select the browse key and click on the appropriate directory. It is extremely important that you not enter a <u>root</u> directory (e.g., c:\ or f:\)

here; you must specify a subdirectory (e.g., c:\MUNIPAY). If the directory you specify does not exist, MUNIPAY will create it for you.

Note that you also have the option of returning to the previous screen by selecting "Back" or to exit the installation program entirely by selecting "Cancel." If you select "Cancel" at any time during the installation process you will receive a message telling you that installation is not complete. This option allows you to install the program later.

Exhibit 2-3

"MUNIPAY INSTALLATION - SECOND SCREEN"
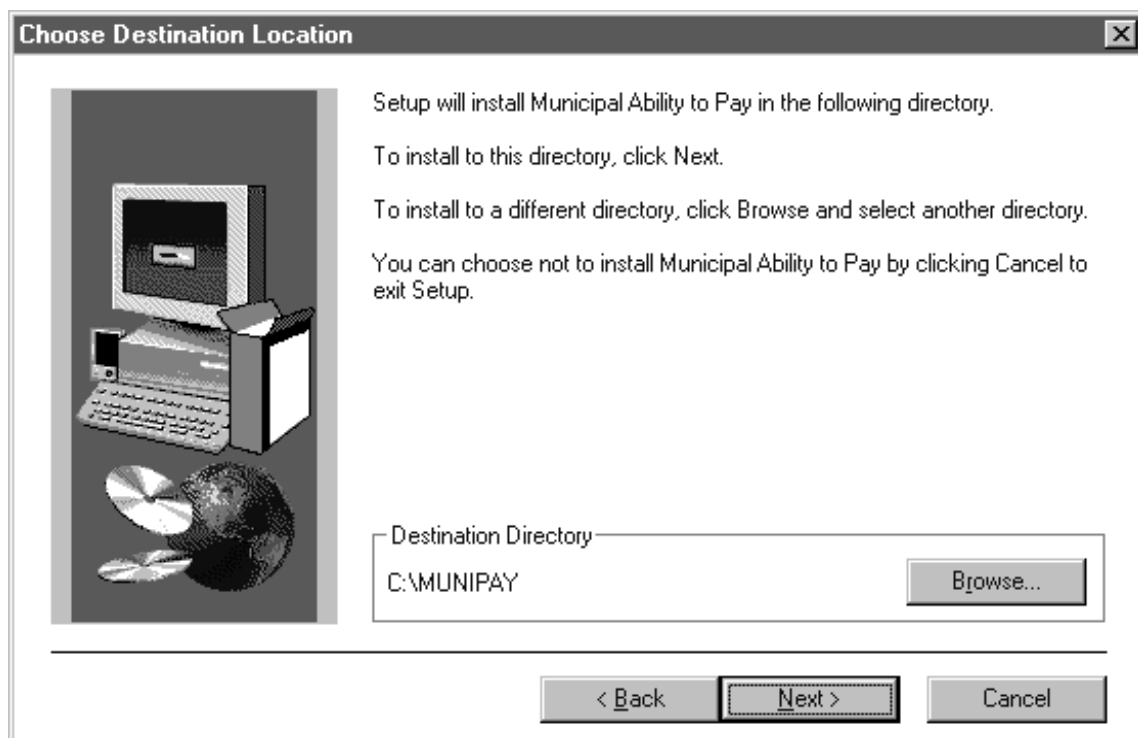
On the third screen, you will be asked to specify a setup option. You should make your decision using the italicized text outlined above, as well as assistance from your computer staff in some cases.
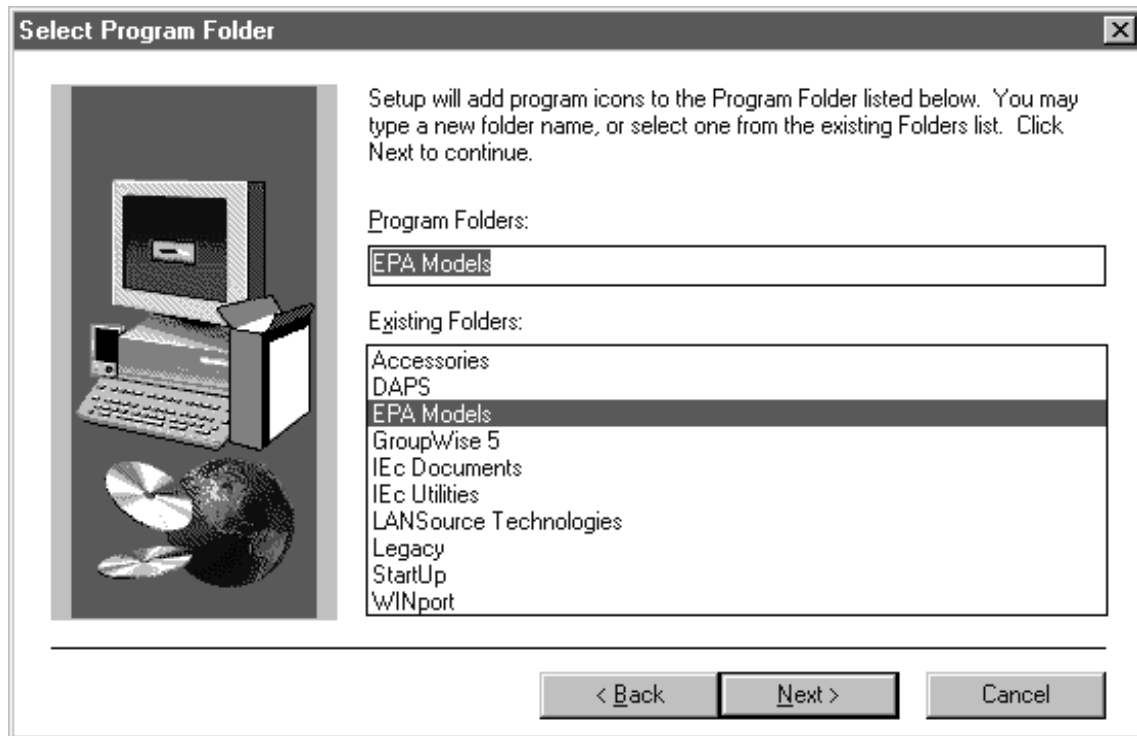
Exhibit 2-4

"MUNIPAY INSTALLATION - THIRD SCREEN"
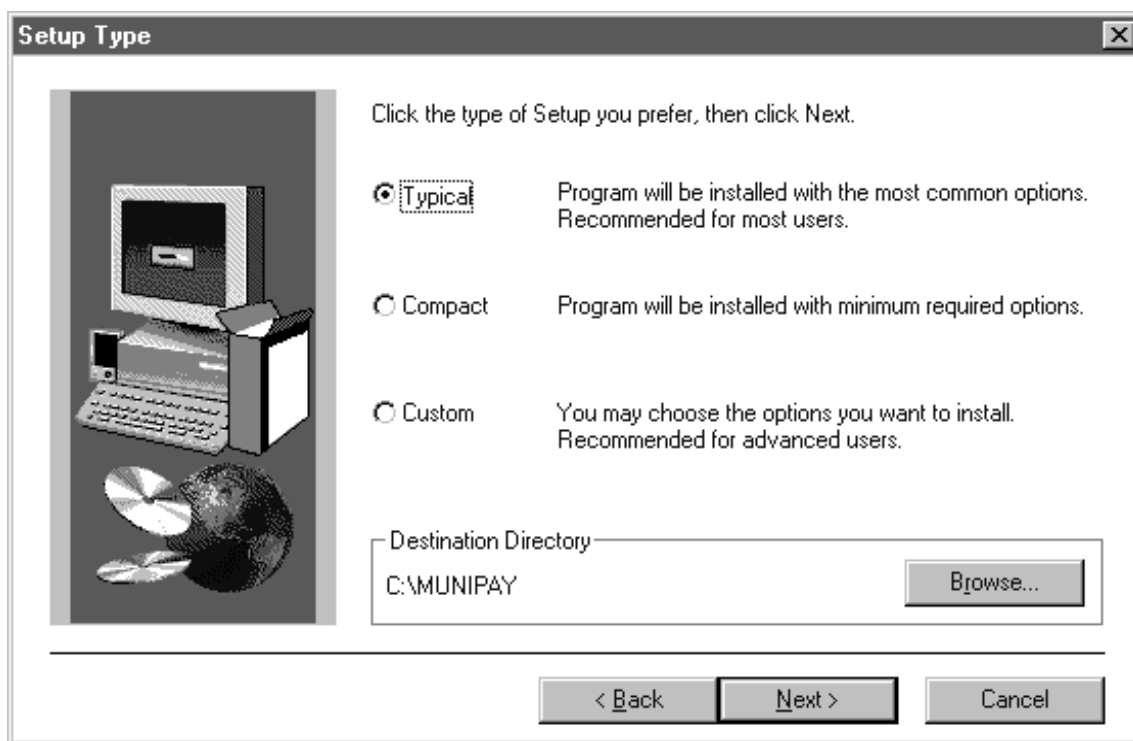
After selecting "Next" on the third setup screen (i.e., Exhibit 2-4), the fourth setup screen will appear, as shown in Exhibit 2-5. This screen allows you to designate the Program Folder (or Program Group if you are running Windows™ 3.x) in which you would like the MUNIPAY icon to reside. The default folder that the model creates for you is EPA Models. You may also choose to install the icon to an alternative Folder (or Group) such as MUNIPAY. After selecting the appropriate Folder (or Group), press "Next."

Exhibit 2-5

"MUNIPAY INSTALLATION - FOURTH SCREEN"

After selecting "Next" on the fourth setup screen, you will be asked to insert Disk 2, as shown in Exhibit 2-6. The "path" displays the location of the MUNIPAY installation disk and *not the directory in which your model will be stored*. For example, in this case the installation disks are located in the a:\ drive.

Exhibit 2-6

"MUNIPAY INSTALLATION - FIFTH SCREEN"
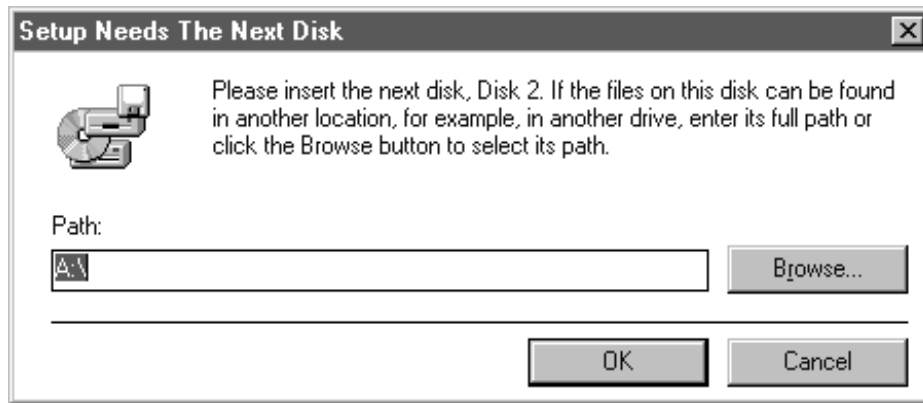
The program will give you a completion notice after all of the MUNIPAY files have been copied to your hard drive. When you have completed the installation process, you should reboot your computer prior to using the MUNIPAY model or any other software package on your computer. Once MUNIPAY has been loaded onto your hard drive, simply double-click the model icon to start the program.

After installing the model, you may wish to create a subdirectory for storage of your case files. You may also choose to store your case files in a pre-existing directory as MUNIPAY case files will not alter any other files stored in that directory (e.g., WordPerfect files, Excel spreadsheets). *Note that you must save your case files in a directory that is different from the directory in which the model is stored.* For example, if the model is stored in "c:\MUNIPAY," you may wish to create a directory titled "c:\MUNIPAY\cases" for storage of your case files.

C.   MODEL ATTRIBUTES

MUNIPAY is an interactive computer program created for use in a Windows™ environment. The following sections illustrate the key attributes of the model, including the general features common to every screen displayed in the model, format of data entries, the help system, how to

correct entry errors, and error messages generated by the model. Note, however, that Chapter 3 provides a complete description of all of the screens.

1. General Features of the Model Screens

The monitor displays input windows and then waits for you to enter information in the appropriate sections of the window, or to edit existing data. The prompt for information will either describe the data you need to enter or ask you a question. In both cases, you can move directly to the input item you need to enter or change by using your mouse or tab key. You must enter certain required information before the program will allow you to proceed to the next window. If you click the "Continue" button at the bottom of the screen before entering required information, the cursor will return to the first line of missing information to prompt your entry. You can always move around the screen to edit an entry that you have already made by using your mouse or tab key.

2. Format of the Data Entries

MUNIPAY is very flexible regarding the format of data entries that it will accept, unlike non-Windows^{TM} models that require specific entry formats (i.e., you cannot enter numerical values with any commas, dollar signs, or percent signs). For example, the financial data screen requires the user to enter the designated fund balance from the municipality's data request form. Suppose that this figure is $45,600. The user can enter that figure as "45600" "45600.00", "45,600", or "45,600.00." The model will record that figure as $45,600.   (MUNIPAY automatically enters the dollar sign for you once you enter the number and move on to the next entry.) The same is true for all other inputs.

Be careful to use only the number keys to enter numerical values. A common mistake is typing the lowercase letter **L** instead of a number 1. Another error occurs if you type the capital

letter **O** instead of the number 0 (zero). The model cannot adjust for figures that you may enter with a mix of both number and letter keys.

3.   <u>Help System</u>

As noted previously, the user can easily access the help system by either pressing the F1 key or clicking on the "Help" button, which most input and output screens provide. The help feature allows the user to obtain help in both running the model and understanding the model's output.

4.   <u>Correcting Typing Errors</u>

After typing your entry, you might discover that you have typed an incorrect letter or number. If you have not yet clicked on the "Continue" button at the base of the window, simply click on the entry containing the error and correct it. For example, if you typed 100,234 and then want to delete one of the zeros, you would simply click on the input box and correct the figure (i.e., 10,234). If you discover the error <u>after</u> you have clicked on "Continue" or at some later time, you can select the same case again, and then click on the appropriate Enter/Edit button to return to the screen where you can correct the entry.

Like all computer programs, MUNIPAY follows the GIGO protocol: "Garbage In, Garbage Out." <u>Verifying</u> your data inputs is therefore extremely important. We recommend that you do so by both examining them on the screen as well as comparing the data printout with the municipality's completed data request form. Most people find that they can perform a better audit by checking the data printout than they can by checking the input window on the computer screen.

5.   Error Messages

The model will notify you quickly if you have made an error that will prevent the model from conducting a demographic or affordability analysis. These types of errors generally include the lack of input information integral to the model's calculations. In such cases, the model will prompt you to return to the missing or inaccurately entered data before continuing on the ability-to-pay analysis. In Exhibit 2-7 below, the user has neglected to enter a value in the financial data section. Error messages like this will appear when data necessary for the operation of the model are missing.

Exhibit 2-7

ERROR MESSAGE FOR MISSING DATA

```
┌─────────────────────────────────────────────────────┐
│ Demographic Data not Complete                    ☒  │
├─────────────────────────────────────────────────────┤
│                                                      │
│    ╭───╮    You have not typed in or selected all    │
│    │ ✕ │    the required data.                       │
│    ╰───╯                                             │
│             The cursor will now move to first blank  │
│             entry field.                             │
│                                                      │
│              ┌──────────────────┐                    │
│              │       OK         │                    │
│              └──────────────────┘                    │
└─────────────────────────────────────────────────────┘
```

6.   Ending Procedures

A key feature of the MUNIPAY Model is the ability to save your data inputs and analysis runs for your cases. The model automatically saves all inputs and runs when you complete each screen, and prompts you if you want to save them again after you have made changes to them. Exhibits 2-8 and 2-9 on the following page provide examples of these prompts.
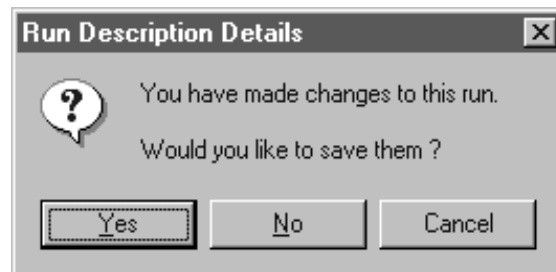
Exhibit 2-8

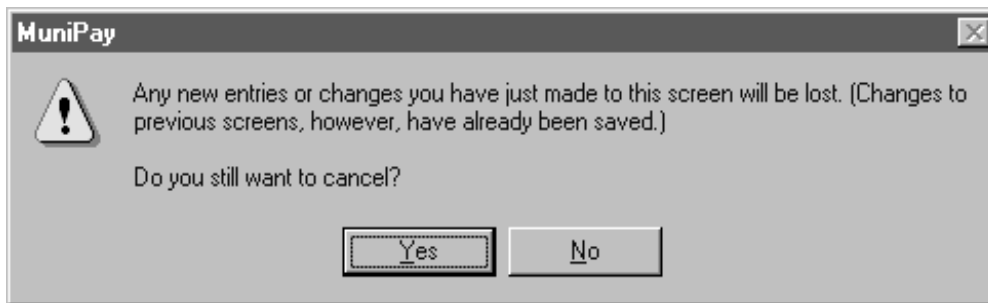**PROMPT FOR SAVING CHANGES TO A CASE**
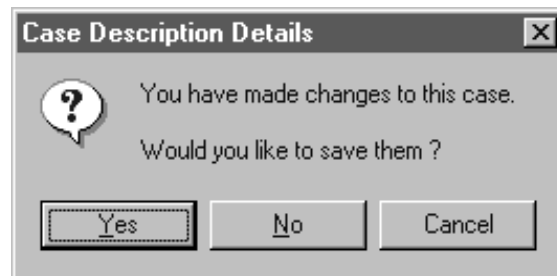
Exhibit 2-9

PROMPT FOR SAVING CHANGES TO A RUN

Furthermore, if you click on the "Cancel" button, MUNIPAY will ask if you really want to lose your changes. Exhibit 2-10 below provides an example of this prompt.

Exhibit 2-10

PROMPT FOR CANCELING CHANGES

Finally, once you are sure you are finished with your MUNIPAY session, simply click on the "Exit" button at the bottom right of the main screen to end the program.

7.   Printing Options

MUNIPAY allows you to print both your data inputs and analysis runs. Simply click on the "Print" button at the bottom of the associated screen. You can print at any time during your MUNIPAY session.